



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,079	04/02/2004	Ronald Truelove	70459-013000	2148
7590	12/14/2005		EXAMINER	
John G. Bisbikis McDermott, Will & Emery 227 West Monroe Chicago, IL 60606-5096			CHANG, CHING	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

88

Office Action Summary	Application No. 10/817,079	Applicant(s) TRUELOVE ET AL.	
	Examiner Ching Chang	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/14/05, 08/02/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed on 09/16/2005.

Drawings

1. The Applicants are required to make appropriate corrections on the drawings as indicated in the Office Action mailed on 06/09/2005.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. ***Claims 1-2, 13, 15, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Waldron (US Patent 2,907,311).***

Waldron discloses a cam follower (18, 21) having a substantially cylindrical form (See Fig. 1), with a cam engaging surface to a base of the substantially cylindrical form and a pushrod (19, 22) engaging surface to the other end, the cam follower being hollow and characterised in that the substantially cylindrical form tapers (See Fig. 1) toward the pushrod engaging surface such that the portion of the cam follower bearing the pushrod engaging surface is substantially conic and substantially hollow; wherein the portion of the cam follower bearing the pushrod engaging surface comprises a frusto conical shape (See Fig. 1); wherein the cam engaging surface is

Art Unit: 3748

substantially flat or spherical; wherein the pushrod engaging surface comprises a cup; wherein an engine valve train comprising the said cam follower (See Fig. 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. ***Claims 1-2, and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speckhart (US Patent 4,173,954) in view of Waldron (US Patent 2,907,311).***

Speckhart discloses a cam follower (20) having a substantially cylindrical form (146, 175), with a cam engaging surface to a base of the substantially cylindrical form and a pushrod (26) engaging surface (176) to the other end, the cam follower being hollow and characterised in that the substantially cylindrical form tapers (170) toward the pushrod engaging surface such that the portion of the cam follower bearing the pushrod engaging surface is substantially conical; wherein the portion of the cam follower bearing the pushrod engaging surface comprises a frusto conical shape (179); wherein the cam engaging surface comprises a roller (148); wherein the pushrod engaging surface comprises a cup; wherein the pushrod engaging surface (176) comprises a ball; wherein an engine valve train comprising the said cam follower (See Fig. 1).

Speckhart discloses the invention as recited above, however, fails to disclose the cam follower bearing the pushrod engaging surface being substantially hollow.

The patent to Waldron on the other hand, teaches that it is conventional in the art of an engine valve operating mechanism, to utilize a hollow and thin walled cam follower (18, 21), in contact with a pushrod (19, 22)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have adopted the application of using the hollow and thin walled cam follower, in contact with the pushrod as taught by Waldron in the Speckhart device, since the use thereof would provide a more light weight cam follower, with less inertia force during the operation.

6. ***Claims 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speckhart (as applied to claim 1) in view of Waldron, and further in view of design choice.***

The modified Speckhart device discloses the invention except for the specific length ratio between tapering portion and the cylinder portion, the tapering angle, and the ratio of diameter to length of cylinder portion bearing the cam engaging surface, in the said cam follower.

Since the modified light-weight Speckhart device already maintains the required bending strength during operation, it would have been an obvious matter of design choice, the dimensional variations would have involved a mere change in the size of a

Art Unit: 3748

component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re rose*, 105 USPQ 237 (CCPA 1955).

Response to Arguments

7. Applicant's arguments with respect to claims 1-2, and 13-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

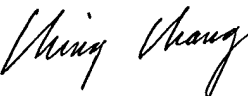
Art Unit: 3748

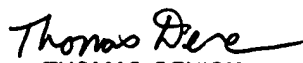
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner


Ching Chang


THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700